

Editorials

Do Guns Matter?

IN THIS ISSUE OF THE WESTERN JOURNAL OF MEDICINE, Jeffrey Kahn, a medical student, presents data on the public health effects of firearm violence in California. His analysis is followed by four policy recommendations. These include repealing California's preemption law, creating a state advisory body, increasing liability for unsafe storage or transfer of firearms, and registering all firearms and firearm owners in the state.¹

Each of these strategies represents an attempt to reduce firearm violence by restricting access to guns or modifying specific aspects of their design, or both. The wisdom of this approach rests, in turn, on the fundamental assumption that the gun matters. Not everyone agrees. The opposing viewpoint is summarized by a famous National Rifle Association slogan—"Guns don't kill people; people kill people."

Few dispute the fact that firearms are highly effective weapons. The case-fatality rate for assaults with a gun (the fraction that end in death) is two to five times higher than the case-fatality rate for assaults with a knife.² Self-inflicted lacerations account for 15% of nonfatal suicide attempts in the United States, but only 1% of suicides.³ Firearms, on the other hand, are rarely implicated in non-fatal suicide attempts, but three fifths of all completed suicides in the United States involve firearms.³

Two competing explanations can be offered for these facts. The first is that firearms make killing easier. Guns give persons the power to inflict lethal force with relatively little effort. Because, on average, a gunshot causes more damage than a comparable wound inflicted by a knife, victims of gun attacks die of their injuries more often than victims of knife attacks.⁴ Advocates of gun control believe that if guns were less readily available, fewer serious injuries would result and fewer victims would die.⁵

Opponents of gun control reject this assertion. They maintain that choosing a gun to commit homicide simply reflects the strength of the assailant's intent to kill.⁶ According to this view, would-be murderers not only seek out firearms, but they aim more carefully and try harder to kill their victims than criminals who use less dangerous weapons.⁴ If this is true, strategies to reduce the availability of guns will not succeed because would-be killers will either work harder to acquire a gun or kill by other means.⁷

Although it is impossible to measure intent directly, it is evident that many criminals use guns without a premeditated plan to kill. Wright and colleagues surveyed a large convenience sample of incarcerated felons about their reasons for carrying a gun. Most reported that they used guns to forestall or overcome victim resistance and to escape unharmed. The most commonly cited reason was "Don't have to hurt victim." More than three fourths of the criminals who actually fired their guns claimed that they had no previous intent to do so.⁸

Because convicted felons may be less than truthful, their statements must be taken with some skepticism. Studies show, however, that robbers who use guns are more successful at completing their crimes and less likely to injure their victims than robbers who use other weapons.^{2,4,5} Unfortunately, we can take little solace from these facts. Although the overall rate of injury in firearm robberies is less than the rate of injury in robberies without a gun, the proportion of gun robberies that result in the death of the victim is three times larger than that for knife robberies and ten times the rate for robberies with other weapons.⁹

Robbery accounts for a relatively small percentage of intentional injuries. Most occur as the result of arguments or altercations between friends, acquaintances, or family members. Zimring studied a large series of aggravated assault cases in Chicago and found that most were precipitated by alcohol and anger instead of a premeditated intent to harm. In more than 80% of gun and knife attacks, only a single wound was inflicted. This suggests that many assailants were more interested in disabling than killing because they did not inflict additional wounds to ensure the death of the victim. Nonetheless, victims who were shot were five times more likely to die than victims who were stabbed.¹⁰

In another study, Zimring found that the type of gun involved in a firearm assault also influences outcome. The fatality rate among victims shot by large-caliber handguns was substantially higher than the fatality rate among victims shot by small-caliber handguns.¹¹ Although one cannot exclude the possibility that offenders intent on killing went to special lengths to secure large-caliber handguns before these assaults, the location of wounds and other factors suggest otherwise. In a fight, combatants tend to reach for the most readily available weapon. The more lethal the weapon, the more likely death will occur.^{2,4,5}

Ironically, the qualities that enhance the lethality of firearms (such as magazine capacity, rate of fire, and "stopping power") are precisely the qualities that make them most desirable as weapons for self-defense. Keeping a gun in the home for protection, however, may do more harm than good.¹² This is particularly true in homes with children and in households marked by alcoholism, drug use, depression, or family violence.

One study of family and intimate assaults in Atlanta, Georgia, revealed that attacks with a gun were 12 times more likely to end in death than attacks by other means.¹³ An analysis of 12 years of homicide statistics from the Federal Bureau of Investigation determined that twice as many women were murdered with a gun by their husbands or intimate acquaintances than were killed by strangers using a gun, a knife, or any other means.¹⁴ When a woman killed with a gun, the victim was five times more likely to be her spouse, an intimate acquaintance, or a family member than to be a stranger or a victim of undetermined relationship.¹⁴

The results of a recent case-controlled study suggest that homes where guns are kept are almost three times more likely to be the scene of a homicide than comparable homes without guns, even after the independent effects of victim age, sex, race, neighborhood, previous family violence, anyone using illicit drugs, and any history of previous arrests were taken into consideration.¹⁵ A gun in the home did not afford protection from homicide by an intruder. Instead, guns were linked to a markedly increased risk of homicide at the hands of a spouse, a family member, or an intimate acquaintance.¹⁵

Does this mean that guns are inherently bad? Of course not. Two things must be present for gun violence to occur—violence and immediate access to a gun. In the absence of violence, a gun is no more dangerous than a bucket of gasoline. A lighted match can certainly start a fire, but the potential for serious injury or death is much greater if you toss in a bucket of gasoline. Likewise, violence can certainly cause harm, but the potential for serious injury or death is increased when a firearm is involved.

The question is this: How can we keep the two apart as often as possible? To paraphrase Sam Levinson, it is not hard to be brilliant. All you have to do is think of something stupid and do the opposite.¹⁶ It's stupid to encourage people to keep guns in their homes for protection without a clear understanding of the overall balance of benefits and risks. It's stupid to let people who have committed a violent crime legally purchase guns because they were smart enough to plea-bargain their charge to a misdemeanor. It's stupid to ignore private sales and theft, which are the major sources of supply to the criminal market.^{2,17} And it's stupid to permit firearms to be manufactured in the United States without any regard for safety, quality, or capacity for harm.¹⁸

Physicians are playing an increasingly important role in this debate. Organizations such as the American Public Health Association, the American Academy of Pediatrics, the American College of Surgeons, and the American College of Emergency Physicians have adopted strong position statements in support of efforts to curb firearm violence. To assume that gun control alone will cure our epidemic of violence would be naive. On the other hand, it would be equally naive to ignore the fact that firearms magnify the consequences of interpersonal violence.

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Ocular Infections—A Rational Approach to Antibiotic Therapy

UNTIL THIS CENTURY blindness was frequently the result of serious ocular infection. Before 1900 an estimated 20% to 79% of children in institutions for the blind in Europe were there because of gonorrheal ophthalmia at birth.¹ In the first half of the 20th century, the incidence of serious eye infections declined because of general improvements in health and nutrition and because of simple public health measures such as Credé's prophylaxis: 1% silver nitrate instilled into both eyes at birth. With the introduction of antibiotics in the 1940s, effective treatment of blinding ocular infections finally became a reality. Since that time, to echo a popular slogan, "We've come a long way."

In the review article elsewhere in this issue of the journal, Robert W. Snyder, MD, PhD, and David B. Glasser, MD, discuss in detail the current concepts of antibiotic therapy for ocular infections and the treatment regimen for some of the more common serious eye infections.² At first glance the most striking observation in the article is the wide choice of antibiotics available to clinicians today. Despite the emergence of new strains of bacteria that are more and more resistant to the antibiotics currently available,³ there always seems to be a new "technologic fix" on the horizon that promises to keep us ahead of the game. The current "fix" in ophthalmology is a new class of antimicrobial agents, the fluoroquinolones. These agents initially held great promise as broad-spectrum antibiotics that could be used as monotherapy for the treatment of severe bacterial keratitis.⁴ The emergence of resistant strains of bacteria, especially streptococcal species, however, has called into question the use of these